

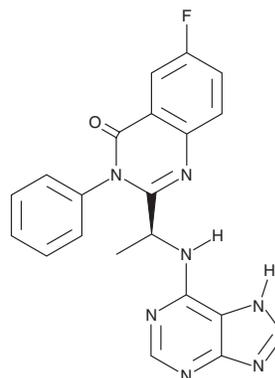
# PRODUCT INFORMATION



## Acalisib

Item No. 25983

**CAS Registry No.:** 870281-34-8  
**Formal Name:** 6-fluoro-3-phenyl-2-[(1S)-1-(9H-purin-6-ylamino)ethyl]-4(3H)-quinazolinone  
**Synonym:** GS-9820  
**MF:** C<sub>21</sub>H<sub>16</sub>FN<sub>7</sub>O  
**FW:** 401.4  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 268 nm  
**Supplied as:** A solid  
**Storage:** -20°C  
**Stability:** ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

Acalisib is supplied as a solid. A stock solution may be made by dissolving the acalisib in the solvent of choice, which should be purged with an inert gas. Acalisib is soluble in the organic solvent DMSO.

### Description

Acalisib is an inhibitor of the class I phosphatidylinositol 3-kinase (PI3K) catalytic subunit p110δ (IC<sub>50</sub> = 12.7 nM).<sup>1</sup> It is selective for p110δ over the class I PI3K subunits p110α, p110β, p110γ, the class II PI3K CIIβ, and the class III PI3K hVPS34 (IC<sub>50</sub>s = 5.4, 3.3, 1.4, 10, and 12.6 μM, respectively), as well as PIP5Kα, PIP5Kβ, DNA-PK, and mTOR (IC<sub>50</sub>s = >10 μM). Acalisib (1 μM) reduces lamellipodia spreading and induces lamellipodia retraction in rat osteoclasts. It reduces proliferation of multiple myeloma tumor cells alone and in combination with melphalan (Item No. 16665) *in vitro* and reduces tumor growth when administered in combination with melphalan in an LAGk-2 mouse xenograft model.<sup>2</sup>

### References

1. Shugg, R.P., Thomson, A., Tanabe, N., *et al.* Effects of isoform-selective phosphatidylinositol 3-kinase inhibitors on osteoclasts: Actions on cytoskeletal organization, survival, and resorption. *J. Biol. Chem.* **288(49)**, 35346-35357 (2013).
2. Sanchez, E., Li, M., Wang, C., *et al.* Phosphoinositide 3'-kinase (PI3K) delta inhibitor, GS-9820, enhances anti-tumor efficacy when combined with conventional chemotherapeutic agents in primary samples and human tumor xenograft model of multiple myeloma. *Blood* **120(21)**, 4017 (2012).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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